1.0 FIDELITY EXPLORATION AND PRODUCTION COMPANY'S WEST FERTILIZER 16-PAD OIL AND GAS PROJECT

1.1 Introduction

The following includes the description of the proposed action derived from proposals submitted by Fidelity Exploration and Production Company (Operator). The proposed action consists of two proposals: (1) The West Fertilizer Master Exploration Plan, which includes 45 oil and gas wells, 15 well pads, 15 access roads, and 15 gas pipelines; and (2) the Cane Creek Unit 25-1-25-19 Application for Permit to Drill (APD), which includes a proposal for up to three oil and gas wells, one well pad, one access road, and one gas pipeline. The operator has also submitted 15 APDs for the 15 well locations in the West Fertilizer Master Development Plan. The proposed action occurs within the Cane Creek federal oil and gas unit, which is located approximately 17 miles northwest of Moab, Utah in Grand County.

1.2 Proposed Action

The following description of the proposed action contains information derived from the West Fertilizer Master Exploration Plan and APDs.

1.2.1 West Fertilizer Master Exploration Plan

The Operator proposes to drill, complete, and produce up to 45 exploratory horizontal exploratory oil and gas wells from 15 new well pads located in the West Fertilizer project area. The Operator would construct and maintain well pads, access roads, and natural gas gathering pipelines to service all new wells. At this time, the Operator has submitted 15 APDs; however, with the West Fertilizer Master Exploration Plan, up to three wells may be drilled on each well pad, depending on the production success of the initial well. The wells would be drilled to produce federal minerals from the Cane Creek shale, a fractured, organic-rich, over-pressured zone in the Paradox Formation of the Pennsylvanian Hermosa Group. The wells would be drilled vertically to total depths ranging from 7,000 to 8,000 feet and then horizontally 5,000 to 8,000 feet in the target zone. Although actual operations are subject to change as conditions warrant, the Operator plans to drill 3 to 6 wells each year over a period of 8 years. The anticipated life of a producing well is estimated to be 30 years.

All materials, construction, operation, maintenance, and reclamation operations for the wells and facilities would be completed by the Operator's personnel or its contractors in accordance with safe and proven engineering practices. The Operator would adhere to the details of construction, drilling, completion, and reclamation operations provided in its Applications for Permits to Drill (APDs), applicable conditions of approval, the Fidelity West Fertilizer Reclamation Plan (April 2015), and the Fidelity Safe Practices Manual (June 30, 2014). These documents describe procedures that would be followed by the Operator and are incorporated into this proposal by reference. Construction operations would employ the principles contained in the BLM's

Hydraulic Considerations for Pipelines Crossing Stream Channels (2007) and Surface Operating Standards for Oil and Gas Exploration and Development, 4th Edition (Gold Book) (2007). The Operator would obtain all necessary federal, state, county, and other permits prior to project initiation. Construction or surface disturbing activities would occur only after APD approval is obtained from the BLM and the Utah Division of Oil, Gas, & Mining (UDOGM).

1.2.1.1. Location, Access, and Lease Information

The 15 West Fertilizer well pads would be located approximately 12 to 22 miles northwest of Moab, Utah, in and near the Bartlett Flat area in the West Fertilizer project area, which includes approximately 35,011 acres of BLM-administered federal land and 3,773 acres of land owned by the State of Utah, administered by the State Institutional Trust Lands Administration. Surface ownership of land within the West Fertilizer project area is provided in Table 1-1. The project area would be accessed by traveling north from Moab on U.S. Highway 191, then west on State Highway (SH) 313. Dubinky Well Road, Spring Canyon Bottom Road, and Mineral Point Road are Grand County Class B roads that travel through the project area and would be used for access to most well pads. Designated Class D routes would leave SH 313 or the Class B roads and be used for general access to well pad locations. Designated routes are authorized for public use by the BLM Moab Field Office Travel Management Plan.

Table 1-1: West Fertilizer Project Area

Surface Owner	**Township – Range (T-R)**	**Sections**
Federal	T24S-R18E	33 (part), 34 (part), 35 (part)
	T24S-R19E	31 (part)
	T25S-R17½E	13 (part)
	T25S-R18E	1, 3, 4, 5, 6 (part), 7 (part), 8,9, 10, 11, 12, 13, 14, 15, 17, 18 (part), 19 (part), 20 (part), 21, 22, 23 24, 25, 26, 27 (part), 28 (part), 34, (part), 35 (part)
	T25S-R19E	3 (part), 4 (part), 5 (part), 6, 7, 8, 9, 10, 11, 12 (part), 13 (part), 14, 15, 16, 17, 18, 19, 20, 21, 22, 23 (part), 24 (part), 26 (part), 27 (part), 28, 29, 30, 31, 33 (part), 34 (part)
	T26S-R18E	1 (part)
	T26S-R19E	4 (part), 5, 6
Total federal acres	35,010.8	
State Of Utah	T24S-R18E	32 (part), 36 (part)
	T24S-R19E	32 (part)
	T25S-R18E	1 (part), 2, 16, 36
	T25S-R19E	32
	T26S-R18E	2 (part)
Total state acres	3,773.2	
Total acres – all owners	38,784.0	

The location of each well pad was chosen by the Operator to:

- Utilize existing Class D roads where available for access.
- Minimize disturbance to surface topography by reducing well pad size to the smallest possible size adequate for drilling and producing up to three productive wells.
- Minimize disturbance to surface topography by orienting the well pad to minimize the amount of cut-and-fill materials.
- Avoid Visual Resource Management (VRM II) areas.
- Minimize the appearance of well pad facilities from the SH 313 Scenic Byway by utilizing geographic information software for simulation.
- Avoid eligible cultural resource sites.
- Avoid important paleontological resources.
- Avoid wildlife habitat protected by the BLM's 2008 Resource Management Plan.

Well locations and lease numbers are listed in Table 1-2. Each well pad may ultimately contain 1-3 wells, resulting in up to 45 wells total.

Table 1-2: West Fertilizer Project Well Locations and Lease Information

Well	Surface Hole Location	Lease	Bottom Hole Location	Lease
CCU 5-1-25-18	565' FSL & 2,600' FEL SWSE Section 5, T25S-R18E	UTU-67552	3,795' FSL & 2,651' FEL S2N2 Section 6, T25S-R18E	UTU-51636
CCU 5-2-25-18	3,037' FNL & 683' FEL Lot 9 Section 5, T25S-R18E	UTU-67552	1,057' FNL & 774' FEL Lot 8 Section 6, T25S-R18E	UTU-51636
CCU 7-1-25-18	1,330' FSL & 816' FEL NESE Section 7, T25S-R18E	UTU-52277	737' FSL & 1,253' FWL SWSW Section 6, T25S-R18E	UTU-51636
CCU 9-1-25-18	1,478' FSL & 551' FWL NWSW Section 9, T25S-R18E	UTU-47858	641' FSL & 816' FWL SWSW Section 4, T25S-R18E	UTU-67552
CCU 13-1-25-18	2,600' FSL & 1,258' FWL NWSW Section 13, T25S-R18E	UTU-66020	2,459' FSL & 742' FWL NWSW Section 23, T25S-R18E	UTU-61182
CCU 21-1-25-18	890' FNL & 271' FEL NENE Section 21, T25S-R18E	UTU-61182	673' FSL & 952' FWL SWSW Section 21, T25S-R18E	UTU-61182
CCU 6-1-25-19	2,909' FNL & 2,446' FEL Lot 10 Section 6, T25S-R19E	UTU-71402	250' FSL & 1,761' FEL SWSE Section 1, T25S-R18E	UTU-51636
CCU 7-1-25-19	2,551' FNL & 2,288' FEL SWNE Section 7, T25S-R19E	UTU-51239	2,115' FNL & 2,469' FWL SENW Section 18, T25S-R19E	UTU-46693
CC 10-1-25-19	754' FNL & 2,244' FEL NWNE Section 10, T25S-R19E	UTU-75131	684' FSL & 781' FEL SESE Section 10, T25S-R19E	UTU-75131
CCU 14-1-25-19	805' FSL & 426' FEL SESE Section 14, T25S-R19E	UTU-46693	717' FSL & 201' FEL SESE Section 15, T25S-R19E	UTU-46693
CCU 17-1-25-19	645' FNL & 266' FEL NENE Section 17, T25S-R19E	UTU-46693	2,146' FNL & 2,594' FEL SWNE Section 9, T25S-R19E	UTU-46693
CCU 19-1-25-19	290' FSL & 306' FWL SWSW Section 19, T25S-R19E	UTU-45036	1,617' FSL & 278' FEL NESE Section 19, T25S-R19E	UTU-51826
CCU 21-1-25-19	2,310' FNL & 1,625' FEL SWNE Section 21, T25S-R19E	UTU-46693	2,025' FSL & 1,663' FWL NESW Section 16, T25S-R19E	UTU-40385
CCU 29-1-25-19	440' FSL & 1,806' FEL SWSE Section 29, T25S-R19E	UTU-46693	172' FNL & 308' FWL NWNW Section 29, T25S-R19E	UTU-46693
CCU 30-1-25-19	456' FSL & 1,973 ' FEL SWSE Section 30, T25S-R19E	UTU-46693	1,420' FNL & 723' FWL Lot 2 Section 30, T25S-R19E	UTU-46693

1.2.1.2 Construction Operations

All surface disturbing activities would be supervised by personnel knowledgeable of specifications, terms, and conditions of the approved APD. Bulldozers, motor graders, dump trucks, trenchers, trackhoes, cranes, welding trucks, forklifts, and heavy-load trucks may be used to construct the access roads, well pads, and gathering lines.

Access roads and well pads would be constructed with native materials found on location to the extent possible. If road and/well pad surfacing is needed for stability, surfacing materials would consist of gravel obtained from Le Grand Johnson, Keys Construction, or other private source. Prior approval from the BLM would be sought before obtaining gravel from federal lands.

The Operator would request prior approval from the BLM if range control structures, such as pasture fences, would need to be cut or re-routed.

1.2.1.2.1 Personnel Requirements and Schedule

Personnel performing construction, drilling, and completion operations would commute from the Moab area daily. Four to six individuals would comprise the construction crew, accessing the location using an average of three light trucks. During construction, heavy equipment, such as bulldozers, bladers, graders, and trenchers, mini-excavators, rotary jackhammers, and offset booms, would be used to perform the earth-moving operations. Approximately 40 truckloads of equipment would be required to transport the drilling rig to a location for assembly. During drilling operations, up to 10 pickup trucks transporting 7 to 10 crew members, other service personnel, and materials and equipment would access the drilling location daily, working 24 hours a day, 7 days per week. Up to 10 pickup trucks transporting 7 to 10 crew members, other service personnel, and materials and equipment would access a well pad daily during completion operations, which would typically take place during the day but could include night work.

Construction of each access road and well pad would require approximately 21 days and generally occur during daylight hours. Drilling operations would require approximately 75 days for each well. Completion and testing operations would require an average of 10 days. Each gas gathering line would likely require 1-4 weeks for construction, depending on its length and terrain considerations. Gathering line integrity testing may be performed at night.

1.2.1.2.2 Water Use

Water for drilling operations would be obtained from the Moab municipal water supply fill station located 470 Kane Creek Blvd., Moab, Utah, after obtaining appropriate approvals. Approximately 7,000 barrels of water from the Moab municipal water supply would be needed to drill each well. Drilling water would be transported by truck from Moab.

Water or air would be used for pressure testing of the gathering lines. If used, water would be obtained from the City of Moab or a private owner that holds valid water rights. Approximately 3,500 barrels may be needed to test all gathering lines.

If used for the control of fugitive dust, water would be obtained from the City of Moab. Water use is estimated in Table 1-3.

Table 1-3: West Fertilizer Project Water Use

Operation	Average Amount per Well or Well Pad (barrels)	Total Amount (barrels)	Total Amount (acre-feet)
Pre-Production and Reclamation			
Construction - Fugitive Dust Control (per pad)	220	3,300	0.42
Drilling (per well)	7,000	315,000	40.60
Pressure Testing - Gathering Lines (per pad)	233	3,500	0.45
Stabilization – Reclamation (per pad)	500	7,500	0.97
Total	7,953 (1 well drilled on a pad)	329,300 (45 wells on 15 pads)	42.44
Production Operations – Weekly Water Use for the Lives of the Wells			
Production Operations – Well Bore Maintenance	Up to 630 per well pad weekly (30 per well daily, or up to 90 per well pad daily)	Up to 9,450 weekly	1.21
Production Operations - Fugitive Dust Control	36 (per well pad weekly)	540	0.07
Total-per week			1.28
Total-per year			66.85
Total-45 wells for 30 years			2,005.51

1.2.1.2.3 Access Roads

Access to the well pads would be obtained by using state highways, Class B roads, and Class D roads. New access roads would be constructed where existing roads do not exist to connect the existing roads to the well pads. No improvements would be needed to state highways or Class B roads. If improvements to county-maintained roads were to be needed, they would be made in coordination with, and with the permission of, the Grand County Road Department and the BLM; however, no improvements would be made in association with the 15 proposed well pads. Class D roads are not maintained by the county and may require upgrading where used for access. Vehicle traffic, personnel movement, construction/upgrading operations would be confined to existing roadways and approved access road and well pad areas.

Class D road upgrades and new access roads would initially be constructed to a standard no higher than necessary to accommodate the intended use in consideration of type and volume of traffic, safety requirements, and environmental conditions. Constructing a minimum-standard road initially would reduce impacts to the surface during drilling and completion operations (Gold Book, page 19). Class D roads would be bladed and new access roads would be bladed and graded to a width of 14 feet prior to drilling operations. Some access roads may need to be widened to a width of approximately 18 to 21 feet at a short-radius curve for a length of

approximately 90 feet, tapering on each side, to provide for off-tracking of tractor-trailer vehicles and/or light vehicle-trailer combinations. The widened curves would be maintained for the life of a well pad. Blading/grading may remove bedrock adjacent to access roads at drainage crossings. Topsoil would be stockpiled on the upslope side of the road.

If commercial production is established, a Class D and access roads would be further upgraded to "resource road" standards as specified in BLM Road Manual 9113, employing the guidelines and BMPs contained the Gold Book and the BLM Road Design Handbook H-9113-1. Production traffic would be limited to the upgraded running surface. Access roads would be maintained during the life of a well pad. Maintenance operations for access roads are described in Section 1.2.1.6.1, Well Pad Facilities and Routine Maintenance.

Upgrading the access roads would require a construction width of 30 feet. Interim reclamation would reduce the running surfaces of these roads to 14 feet, except where previously widened at short-radius curves. Turnouts would be constructed to provide an adequate line of sight where visibility may be obscured by terrain or vegetation. On roads open to the public, turnouts would be located at 1,000-foot intervals or be intervisible, whichever is less. Each turnout would measure approximately 12 feet wide and 200 feet long, including 50-foot transition lengths on either end. Maximum grade would not exceed eight percent. All drainage crossings would be designed as low-water crossings. The road surface would be dipped down the bed of the drainage to facilitate free flow and lined with cobble or riprap. No culverts would be installed. No bridges would be built. Access roads would be crowned and ditched to facilitate drainage away from the travel surface. Depending upon local topography, wing ditches may be approximately 20 to 100 feet long, and would remain within the area cleared for cultural resources. At the edge of the travel surfaces, ditches would be back-sloped 3:1 or less.

Specifications for access road construction and upgrading are displayed in Table 1-4. Approximately 12.7 miles of existing Class D roads would be upgraded to provide access for drilling equipment and 2.3 miles of new access roads would be constructed, resulting in approximately 15.0 miles of upgraded and new roads to the 15 proposed multi-well pads.

Table 1-4: West Fertilizer Project Road Disturbance

Well Pad	Class D Upgrades (feet)	New Access Road (feet)	Total Road Length (feet)	Number of Turnouts	Initial Disturbance (acres) [3]	Initial Reclamation (acres)	Long-term Disturbance (acres)
CCU 5-1-25-18	7,993	1,124	9,117	9	4.2	0.7	3.5
CCU 5-2-25-18	15,705	267	15,972	15	6.8	0.8	6.0
CCU 7-1-25-18	0	583	583	0	0.4	0.2	0.2
CCU 9-1-25-18	4,901	659	5,560	5	2.6	0.5	2.1
CCU 13-1-25-18	0	2,308	2,308	2	1.7	0.8	0.9
CCU 21-1-25-18	3,128	119	3,247	3	1.4	0.2	1.2

Well Pad	Class D Upgrades (feet)	New Access Road (feet)	Total Road Length (feet)	Number of Turnouts	Initial Disturbance (acres) [3]	Initial Reclamation (acres)	Long-term Disturbance (acres)
CCU 6-1-25-19	2,765	82	2,847	2	1.2	0.1	1.1
CCU 7-1-25-19	8,895 [1]	2,194	11,089	11	5.4	1.2	4.2
CC 10-1-25-19	3,608	1,597	5,205	5	2.7	0.7	2.0
CCU 14-1-25-19	4,228 [2]	88	4,316	4	1.9	0.3	1.6
CCU 17-1-25-19	0	1,254	1,254	1	0.9	0.4	0.5
CCU 19-1-25-19	10,680	59	10,739	10	4.6	0.6	4.0
CCU 21-1-25-19	3,213	140	3,353	3	1.5	0.2	1.3
CCU 29-1-25-19	2,065	811	2,876	2	1.5	0.4	1.1
CCU 30-1-25-19	0	994	994	0	0.7	0.4	0.3
TOTAL	67,181	12,279	79,460	72	37.5	7.5	30.0

[1] Does not include 2,765 feet of shared upgraded road attributed to the CCU 6-1-25-19.
[2] Existing Class D road to be re-routed around the proposed CCU 14-1-25-19 well pad in Section 14.
[3] Includes surface disturbance resulting from turnouts and curve widening.

1.2.1.2.4 Well Pads

The dimensions of a typical well pad would be approximately 400 by 500 feet, plus the additional area needed for construction buffers and material stockpiles; however, the actual dimensions of each well pad were determined on a site-specific basis in consideration of the area needed to safely accommodate drilling equipment and production facilities, local topography, and resource concerns. The surface disturbance from each well pad is displayed in Table 1-5.

Table 1-5: West Fertilizer Project Well Pad Disturbance

Well	Initial Disturbance [1] (acres)	Initial Reclamation (acres)	Long-term Disturbance (acres)
CCU 5-1-25-18	7.0	3.5	3.5
CCU 5-2-25-18	6.7	3.7	3.0
CCU 7-1-25-18	7.0	3.9	3.1
CCU 9-1-25-18	7.4	4.6	2.8
CCU 13-1-25-18	7.0	3.9	3.1
CCU 21-1-25-18	7.3	4.3	3.0
CCU 6-1-25-19	6.9	4.2	2.7
CCU 7-1-25-19	6.8	4.3	2.5
CC 10-1-25-19	7.3	4.5	2.8
CCU 14-1-25-19	7.0	3.7	3.3
CCU 17-1-25-19	7.0	4.4	2.6
CCU 19-1-25-19	7.1	3.7	3.4

Well	Initial Disturbance [1] (acres)	Initial Reclamation (acres)	Long-term Disturbance (acres)
CCU 21-1-25-19	7.1	3.8	3.3
CCU 29-1-25-19	7.0	4.0	3.0
CCU 30-1-25-19	6.9	4.0	2.9
TOTAL	105.5	60.5	45.0

[1] Includes the area needed for cut, fill, and stockpile storage.

Approximately six inches of topsoil, or the amount available, would be stockpiled around the perimeter of the well pad for use during reclamation activities. A level well pad area would be constructed by balancing cut and fill areas. Vegetation removed during pad construction would not be placed in or under fill embankments. If excess materials remain because of near-surface bedrock, they would be stored in piles around the perimeter of the well pad separately from topsoil piles. Stockpile slopes would not exceed 20 percent to minimize erosion. Blasting may be required where bedrock is near the surface. Large rocks excavated during construction of a well pad would be positioned around the perimeter of the toe slopes to provide support, stabilization, and erosion control. A 60 by 60-foot (approximate) flare pit would be constructed on the well pad and surrounded by a fenced berm.

Excess materials from one well pad in the Cane Creek Unit may be transported to another unit well pad if needed for location stabilization. All materials moved would be weed-free, and the BLM would be notified of material transfers prior to their occurrence. Sufficient materials would be left at an originating well pad to for use during reclamation operations.

1.2.1.3 Drilling, Completion, and Testing Operations

1.2.1.3.1 Drilling

The Operator plans to use up to two conventional, mechanically-powered mobile Tier II drilling rigs to support the project, each of which would be transported to a well pad by tractor-trailer trucks. Approximately five trailers would be temporarily installed on the well pad for personnel use and equipment storage during drilling operations. If additional wells would be drilled on a pad, the surface hole locations would be separated by approximately 30 feet. A closed loop system would be used to manage cuttings and fluids during drilling operations, eliminating the use of a reserve pit. The type of drilling fluid used would depend on the depth of the wellbore. A well would be drilled progressively with air, air mist and aerated water, and oil-based mud. Oil-based drilling mud would ensure formation stability as the wellbore enters salt formations. Cuttings would be de-watered with a vertical cuttings dryer, centrifuge, or similar equipment and placed in containers for transport by truck to the Klondike Class I Landfill near Moab, or other state-approved disposal facility. The drilling fluid would be returned to the closed loop system.

The casing and cementing program would be designed to isolate and protect all formations encountered in the wellbore and to prohibit pressure communication or fluid migration between zones. Surface and intermediate casing would be cemented back to the surface. Prior to setting

casing, well logs may be run to evaluate a well's production potential. After drilling operations are completed, the drilling rig would be dismantled and demobilized from the well pad.

1.2.1.3.2 Completion and Testing Operations

A completion rig would be moved to a well pad for perforation and testing. Production casing would be perforated, and productive zones would be isolated by the installation of packers in the wellbore. Completion operations may include fracturing the formation with hydrocarbon-based fracturing fluid to stimulate/connect to the reservoir matrix and possibly connect to a natural fracture system(s). Completion liquids would flow or be swabbed out and routed into recovery tanks. Approximately 300 barrels (12,600 gallons) of hydrocarbon-based fluids would be needed to complete each well. Water would not be used (For completion fluids disposal, see Section 1.2.1.5).

A well would then be tested over a period of approximately three or more days during which time natural gas would be temporarily flared from a horizontal pipe located in a pit a minimum of 150 feet from the wellhead until such time when a gathering line is constructed to deliver the natural gas to the DHL pipeline. Oil and water would be separated and temporarily stored in four 500-barrel steel test tank(s) until production facilities are installed on the well pad.

1.2.1.4 Gas Gathering Pipelines

Natural gas gathering pipelines (gathering lines) would connect an economically productive well pad to the Dead Horse Lateral (DHL) pipeline. Buried gathering lines would be constructed of 4 to 12-inch (inner diameter) steel or pressure-rated corrosion resistant coiled pipeline material. The highest normal operating pressure on the gas gathering system would be 75 pounds per square inch (psi) gauge and would occur at the well pad, where it would be limited by mechanical pressure relief valves on the upstream separation equipment. Maintenance operations may temporarily require the normal operating pressure to be exceeded. The pipe wall thickness would ensure sufficient structural integrity for the low-pressure system.

Installation equipment, pipe, and other construction materials would be hauled to the work site by flatbed semi-tractor trailers and stored temporarily on the well pads. To minimize the introduction of noxious invasive species, the construction contractor would be required to have equipment arrive at construction sites in a clean condition, free of weeds and soil. Pipe would be transported from well pads to strategic locations along a gathering line route within the construction corridor on a daily basis.

Each gathering line would be installed in a trench at least five feet deep. Topsoil would be stripped prior to trenching and placed on the opposite side of the trench within reach of a track hoe. Open trenching would normally be performed using a trencher, the size of which would be determined by site-specific terrain conditions, soil depth, and hardness of bedrock. Previous testing of a rock sample from the project area determined that most trenching operations would be performed with standard trenching equipment. If harder bedrock is encountered, a track hoe

may be equipped with a rock wheel or a jackhammer attachment. If absolutely necessary, bedrock may be blasted using small explosive charges and appropriate public safety measures would be taken. Pipe joints would be welded on the adjacent road. An offset boom, operating on the road, would be used to place the pipe in the trench.

Temporary surface disturbance from gathering line construction would result from construction corridors. For all gathering line routes:

- Surface disturbance would be limited to the minimum necessary to accomplish the construction.
- All gathering lines would be buried as close as practical to the running surface of an adjacent road; however, where topographical limitations, short-radius turns, or other site-specific concerns are present, the gathering line trench may be excavated anywhere within the approved construction corridor.
- Pig receivers and low point drains would be installed along the gathering line routes adjacent to roads. In general, pigging assemblies would be installed where gathering line tie-ins would be constructed.
- Construction work would be conducted from the running surface of the road to the extent practical and safe; however, construction equipment and associated vehicles would use the gathering line construction corridor as needed for parking and working.
- Construction equipment may be left overnight within the construction corridor but would not be parked overnight on Class B roads.
- Topsoil would be stockpiled only when blading and/or grading operations are performed. Topsoil stockpiles would be segregated from spoils and placed within the approved construction corridor on the same side of the road as the trench, opposite the trencher. Trees and large bushes would be avoided by topsoil piles as much as practical.
- Excavated spoils would be stockpiled on the running surface of the adjacent road, flattened, and driven on by construction equipment during construction operations. After the pipe is lowered in the trench, spoils would be removed from the road and replaced in the trench and compacted. Extra spoil would be placed on top of the trench and spread to approximate undisturbed adjacent topographic features.
- Topsoil would be redistributed on top of the compacted spoils in the trench. If necessary, topsoil would be acquired from an approved source to fill the top 6-8 inches of the trench after pipe installation.
- Traffic control would be provided when the driving surface of a road is restricted to one direction of travel or when the road is closed, which may be necessary for public safety.
- The Operator would provide the following notice to the public via signs at all access points to roads where construction is taking place:
  (1) Signs would be in place throughout the duration of construction;
  (2) For road closures, signs would be installed at least 24 hours prior and maintained throughout the period of road closure; and

(3) Construction timing would be performed in a manner that maximizes public access or times construction activities during periods of low visitation.

Along Class B roads:

- The approximate 30-foot construction corridor would include 18 feet of off-road work and the running surface of the road.
- The average 24-foot width of a Class B road would be reduced to approximately 12 feet during construction operations. Twelve feet of the running surface would usually remain open for public use; however, the full running surface of the road may be utilized for periods during the construction.
- Where crossing a Class B road, the public would be prevented from using the road for approximately two hours while the road is being trenched and the pipe installed. One mini-excavator would be used at each side of a Class B road crossing in an approximate 30 by 30-foot area, which would be graded and bladed prior to trenching across the road. Topsoil would be stripped and temporarily stored in a small pile within the mini-staging areas. After installation of the pipe, the contours of the mini-staging areas would be restored and topsoil re-spread.

Along Class D roads and well access roads:

- The entire approximate 14-foot running surface of the road would be utilized during construction operations.
- To minimize unwarranted off-road disturbance, an approximate 32-foot construction corridor (total) would be needed, including 18 feet of off-road work and 14 feet on the running surface of the road.
- The construction corridor, including the road surface, may need to be expanded up to 45 feet (total) for a very limited distance in areas where the topography is steep, turns are tight, and/or the Class D or access road is narrow to allow sufficient room for construction equipment to maneuver. Only after prior approval from the 3rd-party monitor, the construction width would be expanded within the area cleared for cultural resources (50 feet from the centerline of existing roads, and 100 feet from the centerline of access roads not yet constructed). Typically, the expanded length would be less than 200 feet, but the width would vary, depending on site-specific conditions.
- In areas where cultural resources are present immediately adjacent to the Class D or access road, a gathering line would be buried beneath the running surface of the road.

Cross-country:

Although not planned for the 15 proposed well pads, gathering line routes for an alternate well pad within the West Fertilizer Master Exploration Plan area may travel cross-country. Gathering lines that would travel cross-country may be installed either above or below ground. Installing a gathering line aboveground on cross-country routes would prevent visual scarring by eliminating the need to remove the shrub and tree cover that would otherwise result from trenching. The

ground surface would not be bladed. Vegetation would not be removed. The exact location of an aboveground gathering line would be located within the cleared cultural resource inventory area in consideration of other site-specific environmental conditions, such as trees, boulders, or bedrock ledges.

- Buried cross-country gathering lines would require an approximate 40-foot construction corridor. Other construction procedures would be qualitatively similar to the procedures previously described for buried gathering lines, except that an adjacent road surface would not be available for use.
- Aboveground gathering lines would be installed using one of two methods. The first method would utilize a cable that would be placed by hand along a cross-country segment of the route. Several sections of the pipe would be welded together on a well pad and attached to the end of the cable. A bulldozer would be stationed at the receiving end to pull the cable and position the welded pipe in place along the route. Using this procedure, surface disturbance would result only from placing the cable by hand and by dragging the pipeline in place, affecting a width of approximately five feet along the length of the cross-country segment.
- Alternatively, aboveground pipe segments would be welded on a well pad and pulled along the cross-country route with the use of a single pass of a bulldozer. The ground surface would not be bladed, and trees would be avoided by the bulldozer. An approximate 15-foot drive route would be used by the bulldozer while pulling the gathering line in place.
- The aboveground gathering lines would largely be left unrestrained so as to allow for thermal expansion to occur freely in order to prevent additional stresses to the pipe. The movement due to thermal expansion is expected to occur mainly in the lateral direction (perpendicular to the pipe) with some movement in the axial direction (along the pipe). The bends in the pipeline route would help to absorb this motion and spread the effects over many smaller areas of movement.
- Aboveground gathering lines may require supports in areas where the ground surface is rough or if washes are present. Pipeline Toolbox software would be used to determine the safe length of spans specific to pipeline design specifications that would not require the use of supports. The pipeline would be restrained on supports that would be secured into the ground to enable a 100-year flood to pass easily under the pipeline. The flexibility afforded by pulling a cross-country gathering line in place would facilitate avoidance of irregular terrain within the cleared cultural resource corridor.

Pigging assemblies would be located where a gathering line would tie into another gathering line or the DHL pipeline, as necessary. Each pigging valve assembly would be protected by a steel pipe tubing enclosure measuring approximately 3 feet high, 4 feet wide, and 16 feet long. Alternatively, rocks may be brought in and placed nearby to serve as security bollards. Low point drains would be located at topographic low points along a route, as necessary. Drain

valves would rise approximately 3 feet above the ground surface and would be protected by a 3-foot high, 3-foot wide, 3-foot long pipe enclosure and/or with rocks. Liquids collected from low point drains would be transferred to a produced water tank for gravity separation and recovery of any gas condensate before the water is transported by truck to the Kane Springs 16-1 waste water injection well or an approved waste water facility for disposal. Where located adjacent to a Class B road or SH 313, the Operator would place the aboveground infrastructure behind trees, shrubs, or rocks, where present. Alternatively, existing soil berms or ridges may be built up or rocks placed to provide visual screening from travelers on an adjacent road. The Operator would install low profile in-line valves that are about 1/10 the size of typical pig launchers and receivers.

A hydrostatic pressure test would be performed for each gathering line prior to operation. The gathering lines would be tested to at least 110 percent of maximum operating pressure using up to 3,500 barrels of water (total). The water would be obtained from a permitted source or a private owner that holds valid water rights.

A well pad may require installation of more than one pipe in a trench, or the original pipe may need to be replaced with a larger diameter pipe, if additional productive wells are drilled and the capacity of the original pipe design is exceeded, in which case the trench would be reopened, another pipeline installed, and the route reclaimed.

The locations of all gathering lines would be marked on the surface with 24-inch (aboveground) brown Carsonite posts at intervisible distances along a route and where a gathering line would cross a designated road (both sides). A sticker would be placed on each post to identify the natural gas gathering line with the name of the operator, contact information. The buried gathering lines would be surveyed in-place so that precise locations with respect to adjacent roads and buried depths can be ascertained. The as-built survey would be provided to the BLM within one month of gathering line completion.

Approximately 23.4 miles of gathering lines would be buried adjacent to roads if all well pads contain a productive well (See Table 1-6).

Table 1-6: West Fertilizer Project Gas Gathering Pipelines

Well Pad	Gathering Line Length (feet)	Initial Disturbance (acres) [1, 2]	Reclamation (acres)	Long-term Disturbance (acres)	Adjacent Class B Road
CCU 5-1-25-18	26,630	8.4	8.4	0	Spring Canyon Bottom Road
CCU 5-2-25-18	15,864	0.8	0.8	0	Not Applicable (NA)
CCU 7-1-25-18	622	<0.1	<0.1	0	NA
CCU 9-1-25-18	5,585	0.3	0.3	0	NA
CCU 13-1-25-18	15,864	6.3	6.3	0	Spring Canyon Bottom Road
CCU 21-1-25-18	3,237	0.2	0.2	0	NA

Well Pad	Gathering Line Length (feet)	Initial Disturbance (acres) [1, 2]	Reclamation (acres)	Long-term Disturbance (acres)	Adjacent Class B Road
CCU 6-1-25-19	2,813	0.2	0.2	0	Crosses Dubinky Well Road
CCU 7-1-25-19	11,184	0.6	0.6	0	NA
CC 10-1-25-19	8,671	1.9	1.9	0	Dubinky Well Road and Spring Canyon Bottom Road
CCU 14-1-25-19	13,526	6.1	6.1	0	NA
CCU 17-1-25-19	4,320	1.5	1.5	0	Spring Canyon Bottom Road
CCU 19-1-25-19	10,757	0.5	0.5	0	NA
CCU 21-1-25-19	658	<0.1	<0.1	0	NA
CCU 29-1-25-19	2,777	0.1	0.1	0	NA
CCU 30-1-25-19	927	0.1	0.1	0	NA
TOTAL	123,435	27.0	27.0	0	

[1] Initial disturbance adjacent to new access road or upgrading a Class D road is corresponds to 2 feet of incremental disturbance since road construction requires a 30-foot corridor and a gathering line normally requires 32 feet.

[2] Initial disturbance was overestimated by 10% to allow for those areas where terrain requires a wider construction corridor, the locations of which would be determined as construction takes place.

Each pigging assembly would affect approximately 0.001 acre, and each low point drain would affect approximately 0.0002 acre. Their installation would not effectively preclude use of the surface and are, therefore, considered incidental disturbance that was not included in the disturbance long-term estimates.

1.2.1.5 Solid Waste and Materials Management

During and after drilling and completion operations, all trash would be stored in a trash cage and hauled to an authorized landfill. Burning would not be allowed. Sewage would be contained in a portable chemical toilet during drilling and disposed of periodically at an approved facility. Greywater generated on location would be stored in holding tanks and disposed of at an approved facility.

A variety of chemicals, including lubricants, solvents, acids, and paints, would be used during construction, drilling, and completion operations. Some of these chemicals contain constituents that are hazardous. Hazardous materials would be temporarily kept in limited quantities on well pads and at the production facilities for short periods of time.

Chemicals meeting the criteria for being an acutely hazardous material/substance or meeting the quantities criteria per BLM Instruction Memorandum No. 93-344 would not be used. Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act in quantities of 10,000 pounds or more would not be used, produced, stored, transported, or disposed of annually during the drilling or completion of a well. In addition, no extremely

hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Safety Data Sheets would be maintained by the Operator or its contractors for all materials used. The transport, use, storage and handling of hazardous materials would follow procedures specified by federal and state regulations. Transportation of the materials to the well location is regulated by the Department of Transportation (DOT) under 49 CFR, Parts 171–180. DOT regulations pertain to the packing, container handling, labeling, vehicle placarding, and other safety aspects.

Hazardous waste would not be generated during any phase of the project. Waste materials generated at the wellhead through the production stream are excluded from regulation by the Resource Conservation and Recovery Act under the exploration and production exemption in Subtitle C [40 CFR 261.4(b) (5)]. Exempt wastes include produced water, drilling mud, well stimulation flowback fluids, and soils that may be accidentally affected by spills of these fluids. They are regulated as solid wastes.

Drilling fluids would be transported by truck to the Danish Flats Environmental Services facility near Cisco, Utah, or the Reams Construction 80 Ponds Disposal Facility near Naturita, Colorado. Completion fluids and water produced during testing would be transported by truck to the Danish Flats Environmental Services facility near Cisco, Utah. If any of these disposal sites would be unable to accept the waste or otherwise unavailable, the waste would be taken to another authorized disposal facility. Disposal or use of the hydrostatic test water would be in conformance with applicable state and BLM requirements.

The Operator would develop, maintain, and implement Spill Prevention Control and Countermeasure Plans (SPCCPs) for the new wells. Drip pans and absorbent pads would be used on the drilling rig to catch and contain oil leaks. Accidental spills of oil, produced water, or other produced fluids would be cleaned up and disposed of in accordance with appropriate regulations and the SPCCP. An accidental leak or spill in excess of the reportable quantity established by 40 CFR Part 117.3 would be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, Section 102 B.

1.2.1.6 Production and Maintenance

1.2.1.6.1 Well Pad Facilities and Routine Maintenance

Each productive well would be equipped with a line heater, a heater-treater, a separator, five 500-barrel crude oil storage tanks, two 400-barrel produced water storage tanks, a 300-barrel fresh water storage tank, natural gas-actuated valve controllers, tank truck loading facilities, a flare, a combustor to eliminate tank vapors, a 500 or 1,000-gallon propane tank, and internal combustion engines to operate a well pump, a tank bottom circulation pump, and a generator. For pads that contain more than one productive well, production equipment would be installed for each well, as previously described, such that up to 3 separators, 15 crude oil tanks and 6

produced water tanks may be installed on a given well pad. Additional facilities would be positioned in close proximity to the facilities of the other productive well(s) on a pad. The number and volume of the tanks that would be installed on a productive well pad have been designed to contain approximately two days of produced hydrocarbons and water for each well. Infrastructure for the proposed 15 well pads would be located on the cut side of a well pad. Each tank would typically be 13.5 feet in diameter and 20 to 24 feet tall. The height of a pumping unit would range from 6 to 44 feet tall. A horizontal or vertical heater-treater would be used. Natural gas originating from the well would be used to supply power to the heater-treater, separator, and engines. A gas meter run would be constructed and located on the well pad. Open stacks/vents would be screened to prevent entry by birds. A productive well pad would be illuminated on a 24-hour basis to facilitate safe operations.

Air emissions control devices that conform to or exceed State of Utah and federal requirements may include, but are not limited to vapor recovery units or combustors, flares, and catalytic converters with air flow ration controllers on natural gas-fired engines. In addition, "no bleed" and "low bleed" valve controllers would be utilized to further minimize air emissions.

The tank battery on each well pad would be surrounded by a berm sufficient to contain the volume of the largest tank plus sufficient freeboard, typically 50 percent additional. All loading lines and valves would be placed inside the berm.

All above ground permanent structures would be painted semi-gloss Shale Green to blend with the surrounding landscape, or as otherwise specified by the BLM. Alloys, plastics, polished, or unpaintable surfaces would be excluded from this painting requirement, in addition to facilities complying with Occupation Health and Safety Act rules and regulations.

Producing wells would typically be visited daily by a pumper, but possibly more frequently, depending upon well performance. Maintenance on access roads would be the responsibility of the Operator and performed as needed to ensure safe conditions commensurate with or better than conditions before operations began and would continue until final abandonment and reclamation. Road maintenance would include, but would not be limited to, blading, crowning, and ditch cleanout. Drainages would be kept open and free of debris, ice, and snow. Vehicle travel would be restricted to the running surface of a road. Project vehicles would obey posted speed limits on paved roads. On unpaved roads, project vehicles would maintain safe speeds commensurate with road and weather conditions but would not exceed 20 miles per hour (mph) to discourage the generation of fugitive dust.

If at any time noxious weeds become established along access roads, gathering line routes, or adjacent or within a well pad, the Operator would utilize an authorized applicator to treat and control weeds with an approved herbicide according to its approved Pesticide Use Proposal. Sprayed and dried vegetation would be raked up and disposed of to prevent the transport of weed seeds to weed-free areas.

A workover operation on a well may be periodically required to stimulate production. A workover operation would use a small rig to perform a variety of maintenance procedures and keep the well operating as efficiently as possible. Workovers may include repairs to the wellbore equipment (downhole plunger pumps, casing, tubing, etc.), the well head, or the producing formation itself. These repairs generally occur only during daylight hours and typically require 3 to 5 days. Workover frequency would vary on a well-specific basis; however, workovers typically occur once every 6 to 12 months after a pumping unit is installed. Maintenance operations may also require that produced natural gas be temporarily flared in the flare pit, particularly if work is being performed on the DHL and/or well pad gathering line.

Some wells may experience flow blockages from the deposition of paraffin in the production tubing as a result of temperature or pressure drops. Salt can also restrict and plug flow. These wells would be serviced by a "cutting" truck to remove the blockages. A cuttings truck is similar in size to a well log wireline truck. This type of maintenance would be performed as needed, possibly as much as weekly.

The Operator would perform internal inspections of its facilities to ensure that normal operations would be in compliance with the Onshore Orders, the APD's Surface Use Plan of Operation and commitments made in the West Fertilizer Master Exploration Plan, the Operator's West Fertilizer Reclamation Plan, and conditions of approval.

1.2.1.6.2 Oil Transportation

Oil would be transported by 282-barrel tanker trucks to a load-out facility in Price, Utah, or to a processing facility in Aneth, Utah. Following initial production and over the six ensuing months, oil production volumes typically decline and truck transport would decrease correspondingly. Oil tanker trucks may initially need to access a well pad several times per day, depending on production volumes of the wells present on a pad. Oil tanker truck traffic would decrease after oil production stabilizes.

1.2.1.6.3 Produced Water Management

Produced water would be transported by 130-barrel trucks to the Kane Springs Unit 16-1 disposal well, located in Section 16, T25S-R18E, to the Danish Flats Environmental Services facility near Cisco, Utah, or other state-approved disposal facility. Water trucks would access a well location on an as-needed basis. Typically, wells produce small volumes of water that increase over time.

1.2.1.6.4 Natural Gas Transportation

Natural gas would be transported via the gathering lines to the DHL pipeline to the existing gas processing plant near Blue Hills Road. After compression and processing at the gas plant, the natural gas would be directed through the existing Greentown Pipeline, which travels parallel to the Blue Hills Road, to the existing Williams-operated Northwest Pipeline near U.S. Highway 191 and commercial markets. Natural gas processing consists of separating all of the various hydrocarbons and fluids from the pure natural gas to produce what is known as 'pipeline quality'

dry natural gas. Natural gas liquids would be separated from the gas stream at the gas plant and transported by truck to the existing fractionation plant in Lisbon Valley.

1.2.1.7 Reclamation

Reclamation Operations would be performed according to Fidelity's West Fertilizer Reclamation Plan, or as directed by the BLM. The reclamation plan includes a list of general procedures that are appropriate to maintaining soil viability after disturbance and reestablishing vegetation on disturbed ground. The plan includes site-specific measures that would be taken on each proposed well pad in consideration of the soils and vegetation communities present. Pre-construction well pad investigations were conducted to develop reclamation practices appropriate to each well pad by identifying site factors that may influence plant growth. Soil and vegetation characterization were used to develop soil salvage, reclamation recommendations, and seed mixes for individual sites. Additional reclamation recommendations in the site-specific prescriptions include mulching, erosion control, monitoring, and weed control. Details of the site-specific reclamation plans in the Operator's Reclamation Plan West Fertilizer Area are incorporated in their entirety into this West Fertilizer Master Exploration Plan.

The site-specific plans were developed, in part, to address and minimize impacts that may result from possible approval of the following request for variance from Onshore Order #1:

> The Operator requests a variance from Onshore Order #1 to delay interim reclamation operations on a well pad for up to two years from the completion date of the first well while the Operator evaluates possibilities for drilling a second well. If at the end of two years a second well has yet to be drilled on this well pad, the Operator would initiate interim reclamation operations. If a second well is drilled within two years of the completion date of the first well, the Operator requests a variance from Onshore Order #1 to delay interim reclamation operations for up to two years from the completion date of the second well while the Operator evaluates possibilities for drilling a third well. If at the end of two years from the completion date of the second well a third well has yet to be drilled on this well pad, the Operator would initiate interim reclamation operations. If a third well is drilled within two years of the completion date of the second well, the Operator will initiate interim reclamation operations within six months of the third well's completion date in accordance with Onshore Order #1.

To facilitate protection of the disturbed surface and adjacent areas and prevent undue wind and water erosion, surface reclamation would be undertaken in three phases: site (interim) stabilization, interim reclamation, and final reclamation. Please refer to the Fidelity West Fertilizer Reclamation Plan for details of the procedures that would be followed and measures that would be taken to perform each phase of reclamation.

Interim stabilization would be accomplished by seeding as soon as possible after completion of the first well on a pad, either immediately or within six months of well completion, depending on

the season and weather conditions. For the construction area outside of a road's running surface and the construction area above a gathering line route, interim reclamation would occur at the same time as interim stabilization. Seeding may be supplemented by the pad-specific measures described in the Fidelity West Fertilizer Reclamation Plan, Appendix 2. Coversoil piles, cut slopes, fill slopes, and other areas where soil loss or erosion is a consideration would be seeded by using a combination of conventional drill seeding on flat areas and gentle slopes, hydroseeding on steep slopes and areas with difficult access, and broadcast seeding where otherwise appropriate. The optimal time of year to seed is early spring or early autumn. Interim stabilization would use a seed mix with grass species only, formulated to be resistant to herbicides that may be used for weed control. Immediate seeding would encourage the growth of grasses on sandy topsoil; result in particle stability, particularly on slopes; promote the development of native seed species (creation of a seed bank); and preserve the biological and chemical viability and the affected soils.

Interim reclamation would be initiated within six months of completion of the final well that would be drilled on a pad. Interim reclamation would return topography to its approximate original form for the portion of the well pad not needed for production operations. Interim reclamation would initially use the same seed mix as interim stabilization. When weeds are controlled, a subsequent seeding with forbs and shrubs would be performed to add species diversity. The chosen seed mix would be specific to each well pad as appropriate to the pre-disturbance soils and vegetation communities.

Final reclamation would be conducted similarly. The entire well pad would be restored to approximate original contours, consistent with adjacent undisturbed topography. Aboveground facilities would be removed. The restored area would be seeded and possibly reseeded, as necessary to achieve the desired mix of vegetation species and prevent the encroachment of weeds.

Weed management for all disturbed areas, including well pads, access roads, and pipeline routes, would be performed during the life of the project, and would focus on three areas: prevention, monitoring, and control. Prevention measures include minimizing the amount of time between construction and the site stabilization phase of reclamation. Disturbed areas would be reclaimed as quickly as practical to minimize the amount of time weeds can propagate.

Weed monitoring would be conducted bi-annually in the early part of the spring growing season and in early fall, to identify any weed emergence prior to seed production. If weeds are identified, weed management procedures would be updated to incorporate the appropriate control measures necessary to eliminate their presence and discourage future growth.

Monitoring would be performed to ensure timely achievement of goals pertaining to site stabilization, interim, and final reclamation. Annual monitoring reports submitted to the BLM would document accomplishments and compliance with all aspects of the reclamation objectives

and standards, identify whether the reclamation objectives and standards are likely to be achieved in the near future without additional actions, and identify actions that have been or would be taken to meet the objectives and standards. The report would include acreage figures for: initial disturbance; successful interim reclamation; and successful final reclamation. Monitoring and reporting would continue annually until interim or final reclamation is approved by the BLM.

1.2.1.8 Design Features and Environmental Protection Measures

Table 1-7 summarizes the design features and environmental protection measures committed to by the Operator.

Table 1-7: West Fertilizer Project Design Features and Environmental Protection Measures

Applicant-Committed Design Features
General
The Operator will secure and adhere to all applicable federal, state, county, and BLM regulations while performing all operations associated with the project.
The Operator will not construct well pads, roads, or gathering lines below the rims of Mineral, Hell Roaring, or Spring Canyons.
The Operator will perform internal inspections of its facilities to ensure that normal operations will be in compliance with the Onshore Orders, its Surface Use Plan of Operation as contained in each APD, other rules and regulations that apply to the project, the West Fertilizer Reclamation Plan, commitments as contained in this West Fertilizer Master Exploration Plan, and any conditions that may result from project approval.
Construction operations will employ the principles contained in the BLM's *Hydraulic Considerations for Pipelines Crossing Stream Channels* (2007) and *Surface Operating Standards for Oil and Gas Exploration and Development, 4th Edition* (Gold Book) (2007).
The Operator will maintain existing and new roads and well pads to the minimum extent needed for safe operations and in accordance with the standards of the BLM throughout the life of the project.
The Operator will implement hiring policies that would encourage the employment of area residents and, to the extent feasible, will purchase equipment and materials from local area merchants.
Firearms will not be allowed at the well sites, and the Operator's drug, alcohol, and firearms policies will be rigorously enforced.
Air Quality
Air emissions will be minimized through the utilization of control devices that conform to or exceed State of Utah and federal requirements.
The Operator will utilize a Tier II drilling rig to reduce pollutant emissions.
All sites for which the Utah Division of Air Quality (UDAQ) will review compliance with emission standards and issue of an Approval Order (AO) will be scrutinized to ensure incorporation of equipment and operational procedures to minimize air emissions. All sites under an AO must conform to Utah Administrative Code (UAC) Title R307-401-8(1)(a): The degree of pollution control for emissions, to include fugitive emissions and fugitive dust, is at least best available control technology (BACT). When determining BACT for a new or modified source in an ozone nonattainment or maintenance area that will emit volatile organic compounds or nitrogen oxides, BACT shall be at least as stringent as any Control Technique Guidance document that has been published by EPA that is applicable to the source. This requirement ensures that each site will implement "at least BACT, which will minimize air emissions as best as practicable. Part of the Operator's commitment to minimize air emissions will be the incorporation of equipment and operational procedures that help reduce air emissions beyond State of Utah and/or federal requirements. One such commitment is to install solar-powered chemical pumps where feasible.

Applicant-Committed Design Features
In addition to conforming to state requirements, each site will review and conform to all applicable federal requirements. Federal requirements may include, but are not limited to, the following Code of Federal Regulations (CFR) Title 40 and listed respective air emission sources: 40 CFR Part 60- New Source Performance Standards (NSPS) Subpart JJJJ- Stationary Spark Ignition Internal Combustion Engines - stationary spark ignition (SI) internal combustion engines (ICE) for which construction commenced after June 12, 2006 where the engine was manufactured on or after July 1, 2007, January 1, 2008, July 1, 2008, or January 1, 2009 depending on engine type and horsepower. Engines modified or reconstructed after June 12, 2006 are also applicable. Subpart OOOO- Crude Oil and Natural Gas Production - gas well workover and completion operations with hydraulic fracturing - centrifugal compressors - reciprocating compressors - continuous bleed natural gas-driven pneumatic controllers - storage vessels 40 CFR Part 63- National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart HH- Oil and Natural Gas Production Facilities - triethylene glycol natural gas dehydration unit Subpart ZZZZ- Stationary Reciprocating Internal Combustion Engines - stationary spark ignition (SI) and compression ignition (CI) reciprocating combustion engines (RICE) for which construction commenced prior to June 12, 2006. 40 CFR Part 50- National Primary and Secondary Ambient Air Quality Standards National Ambient Air Quality Standards (NAAQS) NAAQS exceedances will be avoided for all air emission sources through the implementation of specific equipment, control devices and processes which minimize air emissions.
The Operator will control fugitive dust during construction, drilling, completion, and production operations with the application of water on access roads and well pads. The Operator will obtain approval from BLM prior to using commercial dust mitigation treatment materials as an alternative to water for dust suppression.
The Operator will instruct its employees and contractors not to exceed 20 miles per hour on any well access road during construction, drilling/completion, or normal daily activities to discourage the generation of fugitive dust.
Cultural Resources
The Operator has conducted Class III cultural resource inventories on lands that would be affected by surface-disturbing activities and will avoid all sites determined to be eligible to the National Register of Historic Places. The results of the inventories have been submitted to the BLM under separate cover.
If a previously unidentified cultural resource were to be discovered during operations, the finding will be immediately reported to the BLM or State of Utah, as applicable. Work that would affect the immediate site location will be halted unless authorized by the BLM. Should human remains be discovered during construction operations, all work in the vicinity of the remains will cease; the remains will be protected from further exposure or damage; and the BLM will be notified immediately.
The Operator will prohibit staff and contractors from illegal collection or destruction of cultural resources and will discipline workers violating such policies and laws.
Paleontological Resources
The Operator has conducted paleontological surveys and has submitted the results to the BLM under separate cover.
If a previously unidentified paleontological resource of known scientific significance (i.e., vertebrate fossil) were to be discovered during operations, the finding will be immediately reported to the BLM. Work that would affect the immediate site location will be halted unless authorized by the BLM.
Range and Livestock Management
The Operator will request prior approval from the BLM if range control structures, such as pasture fences, would need to be cut or re-routed. The Operator will immediately repair/reassemble fences. A repair will restore a fence to its original condition.

Applicant-Committed Design Features
During final reclamation after vegetation is reestablished, the Operator will restore all re-routed fences to their original locations.
The Operator will construct a fence around a flare pit to prevent wildlife and livestock entry.
The Operator will avoid range study plots.
Safety and Fire Prevention
The buried gathering lines will be surveyed in-place so that precise locations with respect to adjacent roads and buried depths can be ascertained. The as-built survey will be provided to the BLM within one month of gathering line completion.
The Operator will take the following measures to reduce fuel loads and prevent possible fires: While performing road maintenance, new road construction, or the well pad construction, if any standing live or dead trees were to be damaged, cut down, or knocked over by grading or construction equipment, the Operator will take actions to mitigate the fuel loads from resultant slash. In areas where reclamation of the site would be expected and slash would be utilized to help reclaim the site, the Operator may temporary pile slash until termination of this activity. In areas where reclamation is not planned in the foreseeable future, slash will be disposed. Disposal actions include chipping materials on site with dispersal along the road or pad edge. Hauling of materials will be conducted with the following stipulations: a. The BLM would pre-approve the disposal location. b. Piled vegetation will not be within fifteen feet of standing live trees. c. Because downed trees would provide an opportunity for public firewood cutting and collection, piles will be located adjacent to and accessible by road. All burning of materials will be conducted by BLM specialists.
Soil, Vegetation, and Water Resources
To minimize construction of new roads, the Operator has planned to utilize existing Class D roads as much as possible for access to the well locations.
To prevent unnecessary impacts to environmental resources, the Operator will perform the minimum degree of upgrading (blading/grading) on existing Class D and new access roads to be used for initial access and will perform additional road upgrades only if production is established.
If commercial production is established, Class D and access roads will be upgraded to “resource road” standards as specified in BLM Road Manual 9113.
The Operator will reclaim the construction area outside of the road running surface needed to upgrade Class D roads and construct new access roads to resource road standards.
The Operator has developed a West Fertilizer Area Reclamation Plan (April 2015) to be used to direct and monitor reclamation operations for each well pad to ensure that BLM standards are met. All procedures described in this plan serve as Applicant commitments. The Operator has developed soils and vegetation reports for the new well sites that will be used as baselines to assess reclamation success. The reports have been incorporated into the site-specific reclamation plans. The Operator will provide the BLM with an annual report detailing reclamation status.
Reclaimed areas receiving incidental disturbance during project operations will be reseeded as soon as practical.
The Operator will monitor growth of noxious and invasive species in the project area and will control weeds with the application of commercial herbicides according to its Pesticide Use Proposal.
The Operator will reclaim the surface affected by the installation of buried gathering lines.
Excess materials that may be moved from one unit location to another would be weed-free, and the BLM will be notified of material transfers prior to their occurrence. Sufficient materials will be left at an originating well pad to for use during reclamation operations.
The Operator will utilize a closed-loop drilling system to prevent the creation of a reserve pit and contain drilling fluids.

Applicant-Committed Design Features
The Operator will utilize best management practices for control of nonpoint sources of water pollution to prevent erosion, minimize or prevent sediment production, allow year-round traffic, and ensure safe conditions in its general operating procedures. Erosion control measures will be maintained through the life of the project.
Construction operations will not be conducted using frozen, thawing, or saturated materials or during periods when watershed damage (e.g., rutting, extensive sheet soil erosion, formation of rills/gullies) is likely to occur. If construction equipment creates ruts in excess of four inches deep, the soil will be deemed too wet for construction.
The Operator will conduct pre-construction onsite inspections during which the field crew would be educated to identify and avoid soil crusts where possible.
All drainages will be crossed by roads with low-water crossings.
Where topography would direct stormwater runoff to an access road or well pad, drainage ditches or other common drainage control facilities, such as V or wing-ditches, will be constructed to divert surface water runoff. Natural drainages will not be blocked but may be re-routed to divert runoff away from a well pad and stockpiles. Diversion ditches may be constructed downslope from a well pad to utilize natural drainage features. Excess materials and/or topsoil piles will not be located in drainages. Vegetative debris, weed free straw bales, fabric silt fence, and/or riprap will be placed at the toe of fill slopes or in areas susceptible to erosion.
The Operator will develop and implement Spill Prevention, Control, and Countermeasure Plans for the well pads.
The Operator will construct a berm of sufficient capacity to contain the storage capacity of the largest tank plus sufficient freeboard to contain 150% of the volume of the largest tank to surround the tank battery in accordance with its SPCCP.
Visual Resources
The Operator will paint all permanent paintable structures (onsite 6 months or longer), constructed or installed, Shale Green or a semi-gloss, nonreflective color as determined by the BLM.
Aboveground infrastructure, including gathering line pigging assemblies and low point drains, will be screened from view to the extent possible.
The Operator will request the drilling contractor to provide lighting that would not illuminate areas beyond those areas necessary for operations and not be directed toward the parks.
If flaring would be needed, it would take place from a pipe placed horizontally in a flare pit such that its appearance to a nearby casual observer would be obscured by the berm surrounding the pit.
During interim reclamation, pad corners will be rounded or provided an irregular appearance as much as possible to reduce the visual contrast of a well pad to its undisturbed surroundings.
Wildlife
The Operator will conduct biological resource surveys as directed by the BLM. If the biological resource surveys discover a protected species, appropriate seasonal and spatial buffers, as specified in the 2008 Moab Resource Management Plan, will be applied to project operations.
The Operator will conduct nesting raptor surveys if construction and/or drilling would take place during the period March 1-August 31.
Project operations will not be conducted within 200 meters of an active kit fox den during the breeding season March 1 to July 31.

1.2.2 Cane Creek Unit 25-1-25-19 Application for Permit to Drill

The Operator proposes to drill, complete, and produce three exploratory horizontal oil and gas wells from a new well pad located in the Cane Creek federal oil and gas unit. At this time, the Operator has submitted one APD, with intentions to drill an additional two wells on the well location, depending on the production success of the initial well. As submitted in the APD, the

Operator would construct and maintain one well pad, one access road, and one natural gas gathering pipeline to service the three wells. The well would be drilled to produce federal minerals. The anticipated life of a producing well is estimated to be 30 years.

Construction and maintenance operations will be performed in consideration of best management practices (BMPs) provided in the Bureau of Land Management's (BLM) Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development Gold Book, 4th Edition (2007). All operations connected with construction, drilling, completion, and production will conform to applicable federal, state, county, and BLM regulations, including all Onshore Orders. All necessary permits and authorizations will be obtained prior to the commencement of operations.

1.2.2.1. Location, Access, and Lease Information

The CCU 25-1-25-19 well pad would be located approximately 14 miles west, northwest of Moab, Utah and approximately between the grasslands of Bartlett Flat and Big Flat. The well pad would be accessed by traveling north from Moab on U.S. Highway 191, then west on SH 313 to an upgraded Class D road used to access the existing CCU 26-2 well pad, and continuing on to an unimproved Class D road. Location and lease information for the CCU 25-1-25-19 are provided in Table 1-8.

Table 1-8: CCU 25-1-25-19 Location and Lease Information

Well	Surface Hole Location	Lease	Bottom Hole Location	Lease
CCU 25-1-25-19	783' FSL & 2,103' FEL SWSE Section 25, T25S-R19E	UTU-46693	138' FNL & 747' FEL NENE Section 6, T25S-R18E	UTU-46693

1.2.2.2 Construction Operations

The description of construction operations in Section 1.2.1.2 would be qualitatively the same for the CCU 25-1-25-19 well pad. Quantitative differences are noted in this section.

The amount of water that would be used for this well pad is quantified in Table 1-3 as described for a single well pad. If water is used for hydrostatic testing of the gas gathering pipeline, approximately 233 barrels, or 0.03 acre-feet would be needed.

Specifications for access road construction and upgrading are displayed in Table 1-9. Approximately 1.3 miles of an existing Class D road would be upgraded to provide access for drilling equipment and 0.4 mile of new access road would be constructed. Acres for well pad surface disturbance are displayed in Table 1-10.

Table 1-9: CCU 25-1-25-19 Road Disturbance

Well Pad	Class D Upgrades (feet)	New Access Road (feet)	Total Road Length (feet)	Number of Turnouts	Initial Disturbance (acres) [2]	Initial Reclamation (acres)	Long-term Disturbance (acres)
CCU 25-1-25-19 [1]	6,937	2,051	8,988	8	4.4	1.0	3.4

[1] Existing Class D road to be re-routed around the proposed CCU 25-1-25-19 well pad in Section 25.
[2] Includes surface disturbance resulting from turnouts and curve widening.

Table 1-10: CCU 25-1-25-19 Well Pad Disturbance

Well	Initial Disturbance [1] (acres)	Initial Reclamation (acres)	Long-term Disturbance (acres)
CCU 25-1-25-19	7.4	4.8	2.6

1.2.2.3 Drilling, Completion, and Testing Operations

The description of drilling, completion, and testing operations in Section 1.2.1.3 would be essentially the same for the CCU 25-1-25-19.

1.2.2.4 Gas Gathering Pipeline

The Operator plans to install a buried gas pipeline to transport gas from the well location to the Dead Horse Lateral pipeline. The procedures for installing a buried gas gathering pipeline in Section 1.2.1.4 would be essentially the same for the CCU 25-1-25-19. An approximate 1.7-mile gathering pipeline would be buried adjacent to the access road if the well pad contains a productive well (See Table 1-11)

Table 1-11: CCU 25-1-25-19 Gas Gathering Pipeline

Well Pad	Gathering Line Length (feet)	Initial Disturbance (acres) [1, 2]	Reclamation (acres)	Long-term Disturbance (acres)	Adjacent Class B Road
CCU 25-1-25-19	8,816	0.4	0.4	0	NA

[1] Initial disturbance adjacent to new access road or upgrading a Class D road is corresponds to 2 feet of incremental disturbance since road construction requires a 30-foot corridor and a gathering line normally requires 32 feet.

[2] Initial disturbance was overestimated by 10% to allow for those areas where terrain requires a wider construction corridor, the locations of which would be determined as construction takes place.

1.2.2.5 Solid Waste and Materials Management

The description of solid waste and materials management in Section 1.2.1.5 would be essentially the same for the CCU 25-1-25-19.

1.2.2.6 Production and Maintenance

The description of production and maintenance operations in Section 1.2.1.6 would be essentially the same for the CCU 25-1-25-19 well pad.

1.2.2.7 Reclamation

The description of reclamation operations in Section 1.2.1.7 would be essentially the same for the CCU 25-1-25-19, including the adoption of reclamation procedures outlined in Fidelity's West Fertilizer Reclamation Plan.

1.2.1.8 Design Features and Environmental Protection Measures

The design features and environmental protection measures included in Table 1-7 would apply to the wells on CCU 25-1-25-19 well pad.

1.2.2 Proposed Action Surface Disturbance Summary

Project implementation would result in initial and long-term disturbance to the surface. The surface disturbance estimates shown in Table 1-13 are conservative; i.e., all 48 wells were assumed to be drilled and productive, and all 16 well pads would be in use for the duration of the project. Initial disturbance would be the amount of the surface needed for construction, drilling, and completion operations prior to interim reclamation. Long-term disturbance would consist of bare ground that would remain for the productive life of a well pad and the acreage used for access to the well pads after interim reclamation has been performed. The acreage for each well pad would be sufficient to accommodate up to three wells on any particular pad.

The initial surface disturbance that would result from constructing a new access road or upgrading an existing Class D road plus installing a gathering line was estimated to require a minimum disturbance width of 32 feet. Surface disturbance from the construction of turnouts, estimated at one turnout per 1,000 feet of road length, and from road widening at short-radius curves was also estimated added to the quantification. Surface disturbance that may result from installation of a gathering line in areas of difficult construction was conservatively estimated to result in 10 percent of additional temporary disturbance, which was also added to the total amount. After interim stabilization, long-term disturbance from road construction would result from a 14-foot running surface for upgraded and new roads, turnouts, and widened curves. Reclamation of the buried gathering line routes would result in no long-term disturbance.

Table 1-13: Proposed Action Surface Disturbance Summary, 16 Well Pads

Well Pad	Surface Disturbance (acres)		
	Initial Disturbance	Interim Reclamation	Long-term Disturbance
CCU 5-1-25-18	19.6	12.6	7.0
CCU 5-2-25-18	14.3	5.3	9.0
CCU 7-1-25-18	7.4	4.1	3.3

Well Pad	Surface Disturbance (acres)		
	Initial Disturbance	Interim Reclamation	Long-term Disturbance
CCU 9-1-25-18	10.3	5.4	4.9
CCU 13-1-25-18	15.0	11.0	4.0
CCU 21-1-25-18	8.9	4.7	4.2
CCU 6-1-25-19	8.3	4.5	3.8
CCU 7-1-25-19	12.8	6.1	6.7
CC 10-1-25-19	11.9	7.1	4.8
CCU 14-1-25-19	15.0	10.1	4.9
CCU 17-1-25-19	9.4	6.3	3.1
CCU 19-1-25-19	12.2	4.8	7.4
CCU 21-1-25-19	8.6	4.0	4.6
CCU 29-1-25-19	8.6	4.5	4.1
CCU 30-1-25-19	7.7	4.5	3.2
CCU 25-1-25-19	12.2	6.2	6.0
TOTAL	182.2	101.2	81.0

Source: Survey plats.